

cylinder 14, the pressure piston is moved against the power of the return spring , and the fluid pressure is generated in the pressure chamber.

**[0051]** The bottoming condition is the condition in which, in the master cylinder 14, (1) the front pressure piston of the two pressure pistons is contacted to the stopper 19 of the master cylinder 14 (it also may be the bottom part of the master cylinder), (2) the rear pressure piston is contacted to the front pressure piston 14a, or (3) both conditions (1) and (2) occur (the front pressure piston is contacted to the master cylinder and the rear pressure piston is contacted to the front piston ).

IN THE CLAIMS:

Please replace claims 1, 3, 5, 6, 8 and 9 as follows:

1. (Twice Amended) A brake device having a fluid pressure source which generates a fluid pressure based on operation of a brake operating member, the brake device actuated by the fluid pressure generated by the fluid pressure source, comprising:

a brake operating amount detector which detects an operating amount of the brake operating member,

a fluid source pressure detector which detects the pressure generated in the fluid pressure source, and

a failure detector which detects and distinguishes between different types of failures of the brake device based on the pressure detected by the fluid source pressure

detector and the operating amount detected by the brake operating amount detector, wherein the failure detector detects and distinguishes the types of the failures between: (i) a case in

which the pressure detected by the fluid source pressure detector at a time when the detected operating amount is a first predetermined amount of operation which is smaller than a second

predetermined amount of operation is smaller than a first predetermined pressure which is larger than a second predetermined pressure, (ii) a case in which the pressure detected by the

fluid source pressure detector at the time when the detected operating amount is the first

*i: P<sub>MC</sub> < P<sub>th1</sub> = normal condition    ii: P<sub>mo</sub> > P<sub>th1</sub> = Servo    iii: P<sub>mo</sub> > P<sub>th2</sub> = Servo    iv: P<sub>mo</sub> < P<sub>th2</sub> = under serv. (14)*

*C6*  
*D12 Contd*

predetermined amount of operation is larger than the first predetermined pressure, and (iii) a case in which the pressure detected by the fluid source pressure detector at a time when the operating amount detected by the brake operation amount detector is the second predetermined amount of operation is larger than the second predetermined pressure.

*D12 Contd*

3. (Twice Amended) The brake device as in claim 1, wherein the fluid pressure source includes a master cylinder which generates the fluid pressure corresponding to an input power, and a booster which increases an operation power of the brake operating member and outputs an increased operation power to the master cylinder,

*C7*

the fluid source pressure detector includes a master cylinder pressure detector which detects the pressure of the master cylinder or a connected portion of the master cylinder, and

*fog5*

the failure detector detects a failure of the booster in the case that the pressure of the master cylinder at the time when the opening amount of the brake operation detected by the operating amount detector is the second predetermined amount of operation is larger than the second predetermined pressure, and detects the failure of fluid leakage of the brake device in a case that the pressure of the master cylinder at the time when the amount of the brake operation is the second predetermined amount of operation is smaller than the second predetermined pressure.

$P_{M2} > P_{H2}$   
= boost fails  
or fluid leak  
Case need  
 $P_{MD} \leq P_{Pr}$   
to be true  
must return  
(fog5)

*C8*  
*D2 Contd*

5. (Twice Amended) The brake device as in claim 4, wherein the brake operating amount detector includes an operation power detector which detects power supplied to the brake operating member, and

the bottoming detector detects the bottoming condition based on whether an increasing gradient of the operation power detected by the brake operating amount detector is larger than a predetermined gradient or not.

6. (Twice Amended) The brake device as in claim 5, further comprising a brake fluid control device which controls a brake fluid pressure in different ways based on the type of the failure detected by the failure detector,

*D12 Contd*

*diff from 3*

the fluid source pressure detector includes a master cylinder pressure detector which detects a master pressure of the master cylinder or a connected portion of the master cylinder,

*C8*

the failure detector detects a small amount fluid leakage failure in the case that the pressure detected by the master cylinder pressure detector at the time when the brake operation detected by the brake operating amount detector is the first predetermined operation is larger than the first predetermined pressure, and a decreasing gradient of the master pressure detected by the master cylinder pressure detector is larger than a predetermined gradient,

*PM0 > Pth1*  
*but PM2 decreasing*  
*and only part of the gradient*

the brake fluid control device includes a leak amount control device which increases a supplying amount of a brake fluid to a brake, if the failure detector detects the small amount fluid leakage failure, compared to the supplying amount of the brake fluid when a large amount fluid leakage failure is detected.

8. (Twice Amended) The brake device as in claim 1, further comprising a brake fluid control device which controls a brake fluid pressure in different ways based on the type of the failure detected by the failure detector,

*D12 Contd*

the fluid pressure source includes a master cylinder which has a pressure chamber and generates the fluid pressure corresponding to an input power, a first compressing device which compresses an operating fluid of the pressure chamber of the master cylinder and supplies a compressed operating fluid to a brake, a second compressing device which compresses the operating fluid stored in an atmospheric condition in a reservoir chamber, the reservoir chamber is larger than the pressure chamber of the master cylinder, and

1  
the brake fluid control device includes a brake condition selection device  
*and open*

which selects either of a first condition in which the brake is compressed by the first compressing device, or a second condition in which the brake is compressed by the second compressing device based on the type of the failure detected by the failure detector.

9. (Twice Amended) A brake device having a fluid pressure source which generates a fluid pressure based on operation of a brake operating member, the brake device actuated by the fluid pressure generated by the fluid pressure source, comprising:

a brake operating amount detector which detects an operating amount of the brake operating member,

a fluid source pressure detector which detects the fluid pressure generated in the fluid pressure source,

a failure detector which detects and distinguishes between different types of failures of the brake device based on the pressure detected by the fluid source pressure detector and the operating amount detected by the brake operating amount detector, and

a brake fluid control device which controls the brake fluid pressure in different ways based on the type of the failure detected by the failure detector, wherein the fluid pressure source includes a master cylinder which has a pressure chamber and generates the fluid pressure corresponding to an input power, a first compressing device which compresses an operating fluid of the pressure chamber of the master cylinder and supplies a compressed operating fluid to a brake, a second compressing device which compresses the operating fluid stored in an atmospheric condition in a reservoir chamber, the reservoir chamber is larger than the pressure chamber of the master cylinder, and

*and open*  
the brake fluid control device includes a brake condition selection device  
which selects either of a first condition in which the brake is compressed by the first compressing device, or a second condition in which the brake is compressed by the second

P/D  
Contd  
C 9

*C P (2) gmt'd*  
compressing device based on the type of the failure detected by the failure detector.

Please add claims 22-30 as follows:

--22. A brake device having a fluid pressure source device which generates a fluid pressure source device which generates a fluid pressed based an operation state of a brake operating member, the brake device comprising:

a fluid source pressure detector which detects the pressure generated in the fluid pressure source device; and

*C P  
P (2)  
gmt'd*  
a failure determining device which determined that there is a first failure when a combination of the operation state of the brake and the fluid pressure is a first combination state, and determines that there is a second failure being different from the first failure if the combination of the operation of the brake and the fluid pressure is a second combination state being different from the first combination state.--

--23. A brake device as in claim 22, wherein the failure determining device detects and distinguishes the types of the failures between a case in which the pressure detected by the fluid source pressure detector at the time when the detected amount of the brake operation <sup>where is it?</sup> is a second predetermined amount of operation which is smaller than a first predetermined amount of operation is smaller than the second predetermined pressure which is larger than the first predetermined pressure, and a case in which the pressure is larger than the second predetermined pressure, and if the pressure detected by the fluid source pressure detector at a time when the amount of the brake operation detected by the brake operation amount detector is the first predetermined amount of operation is smaller than the first predetermined pressure.--

--24. The brake device as in claim 23, wherein the fluid pressure source includes a master cylinder which generates the fluid pressure corresponding to an input power, and a booster which increases an operation power of the brake operating member and outputs an increased operation power to the master cylinder,

the fluid source pressure detector includes a master cylinder pressure detector which detects the pressure of the master cylinder or a connected portion of the master cylinder, and

the failure determining device detects a failure of the booster in the case that the pressure of the master cylinder at the time when the opening amount of the brake operation detected by the operating amount detector is the second predetermined amount of operation is larger than the second predetermined pressure, and detects the failure of fluid leakage of the brake device in a case that the pressure of the master cylinder at the time when the amount of the brake operation is the second predetermined amount of operation is smaller than the second predetermined pressure.--

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--25. The brake device as in claim 24, wherein the failure determining device includes a bottoming detector which detects a bottoming condition in the master cylinder.--

--26. The brake device as in claim 25, wherein the brake operating amount detector includes an operation power detector which detects power supplied to the brake operating member, and

the bottoming detector detects the bottoming condition based on whether an increasing gradient of the operation power detected by the brake operating amount detector is larger than a predetermined gradient or not.--

--27. The brake device as in claim 26, further comprising a brake fluid control device which controls a brake fluid pressure in different ways based on the type of the failure detected by the failure determining device,

the fluid source pressure detector includes a master cylinder pressure detector which detects a master pressure of the master cylinder or a connected portion of the master cylinder,

the failure determining device detects a small amount fluid leakage failure in the case that the pressure detected by the master cylinder pressure detector at the time when

the brake operation detected by the brake operating amount detector is the first predetermined operation is larger than the first predetermined pressure, and a decreasing gradient of the master pressure detected by the master cylinder pressure detector is larger than a predetermined gradient,

the brake fluid control device includes a leak amount control device which increases a supplying amount of a brake fluid to a brake, if the failure determining device detects the small amount fluid leakage failure, compared to the supplying amount of the brake fluid when a large amount fluid leakage failure is detected.--

--28. The brake device as in claim 26, wherein:

the master cylinder has two pressure chambers and generates the fluid pressure corresponding to the input power,

the brake device includes a front side brake connected to one of the two pressure chambers and a rear side brake connected to the other of the two pressure chambers, and

the fluid source pressure detector includes a front wheel side pressure detector which detects the fluid pressure of the pressure chamber which is connected to the front side brake or a portion connected to a corresponding pressure chamber of the master cylinder.--

--29. The brake device as in claim 22, further comprising a brake fluid control device which controls a brake fluid pressure in different ways based on the type of the failure detected by the failure determining device,

the fluid pressure source includes a master cylinder which has a pressure chamber and generates the fluid pressure corresponding to an input power, a first compressing device which compresses an operating fluid of the pressure chamber of the master cylinder and supplies a compressed operating fluid to a brake, a second compressing device which compresses the operating fluid stored in an atmospheric condition in a reservoir